296
20

13902
1894

A.D. 1894. JULY 19. N° 13,902.
ALLDAY & *others'* COMPLETE SPECIFICATION.

(1 SHEET)

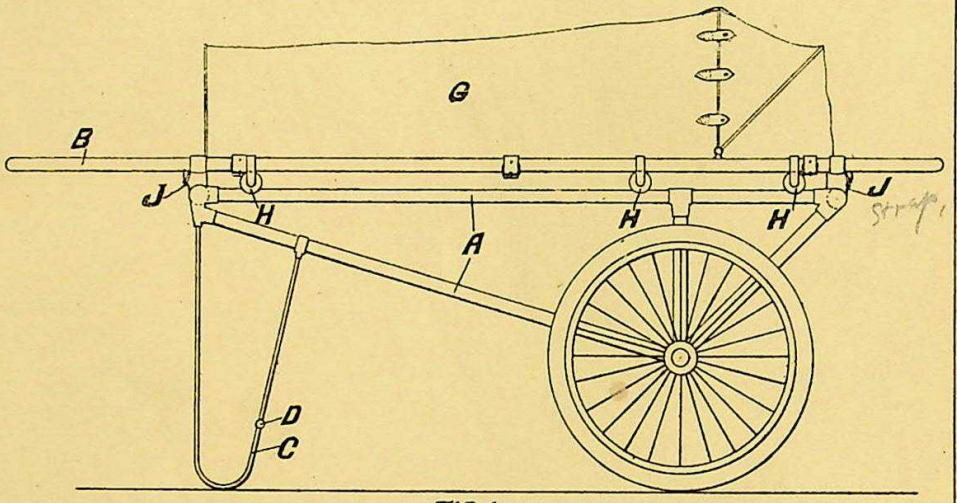

FIG. 1

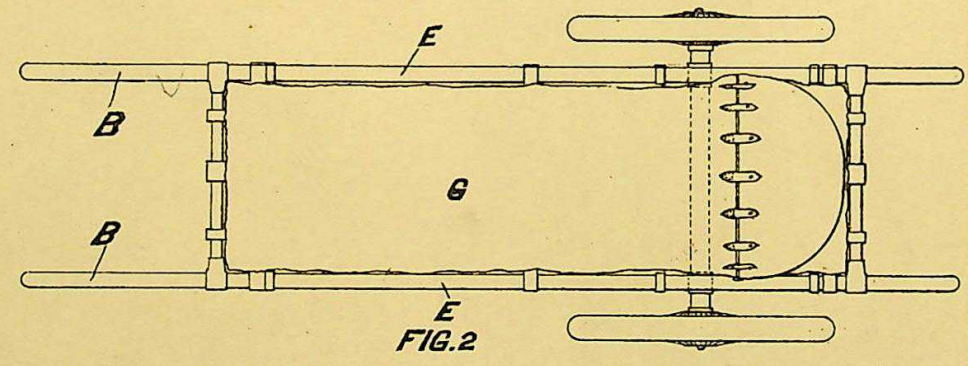

FIG. 2

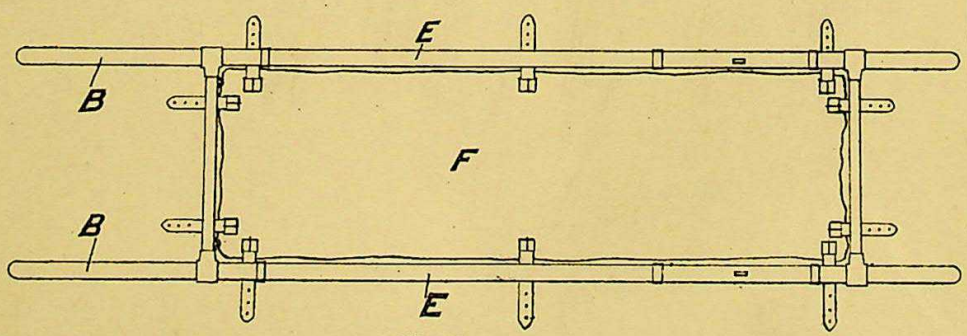

FIG. 3

[This Drawing is a reproduction of the Original on a reduced scale.]

LONDON: Printed by DARLING and SON Ltd.
for Her Majesty's Stationery Office. 1895

Malby & Sons, Photo-Litho.

LIBRARY
OCT 24 1895
U. S. PATENT OFFICE

N° 13,902 A.D. 1894

DUPLICATE

Date of Application, 19th July, 1894
Complete Specification Left, 20th May, 1895—Accepted, 22nd June, 1895

PROVISIONAL SPECIFICATION.

Improvements in Ambulances.

We, WILLIAM ALLDAY and EDMUND ALLDAY, both of Great Western Works, Small Heath, in the County of Warwick, Engineers, and ALFRED ROBERT TOZER, Chief Superintendent, Fire Brigade, in the City of Birmingham, do hereby declare the nature of this invention to be as follows :—

This invention relates to improvements in ambulances for the conveyance of injured or disabled persons, our object being to construct such carriages of light weight but of great strength and so arranged that an injured person may be removed therefrom and lain without lifting or like disturbance upon a bed or table.

In carrying our invention into effect we construct the underframe of the improved ambulance from two or more tubes, preferably of weldless steel, arranged longitudinally and connected or braced together by two or more cross tubes. The cross tubes are preferably attached to the longitudinal tubes by means of tee socket pieces or by brazed connections. The underframe is mounted upon suitable springs and carried by an axle provided with light wheels of the cycle type, having india-rubber, pneumatic, or other tyres. The ears and brackets forming the connection between the underframe and the outer ends of the springs, are brazed or otherwise attached to the longitudinal tubes, and the one or both ends of such tubes are prolonged and suitably shaped to form convenient handles for wheeling or propelling the ambulance. We provide a foot or support at the head end of the ambulance, by attaching a rod or tube preferably of U shape on each side of the underframe, stayed or connected together by a small tie rod. We also attach a light box to the underframe for the reception of surgical dressing and other materials required in the rendering of first aid to injured persons.

The stretcher frame which is carried upon but quite independent from the underframe, is in like manner constructed from tubes arranged in a longitudinal and transverse direction, and provided with suitable socket, or other connecting pieces, to secure the parts together. Connections are also provided for suspending a woven wire other spring mattress and the canvas hammock or like part of the stretcher, and for securing the wire or other ribs or stays of the hood or cover. Loop or staple pieces are secured to the stretcher frame to receive the ends of straps that may be required to secure the injured or disabled person, or for fastening the sides of the canvas or other hood.

We preferably secure the canvas hammock or like part by strapping it to the stretcher frame, or by some suitable connections enabling the hammock to be readily detached from the frame when the stretcher with the injured person is lain upon a bed or table. The wire or other spring mattress beneath the hammock is also so connected to the frame that it may be readily detached. In this manner we provide for the withdrawal of the stretcher from the injured person, and thus avoid the necessity of lifting the person from the stretcher.

We do not limit the application of our invention to the production of ambulances of any one design, but modify the form of tubular construction and the application of detachable mattresses and hammocks as hereinbefore described, to meet the

particular requirements of varying services, and making the ambulance suitable for propulsion either by manual or horse power.

Dated this 18th day of July 1894.

MARKS & CLERK,
18, Southampton Buildings, London, W.C., and
13, Temple Street, Birmingham, Agents for the Applicants.

COMPLETE SPECIFICATION.

Improvements in Ambulances.

We, WILLIAM ALLDAY and EDMUND ALLDAY, both of Great Western Works, Small Heath, in the County of Warwick, Engineers, and ALFRED ROBERT TOZER, Chief Superintendent, Fire Brigade, in the City of Birmingham, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

This invention relates to improvements in ambulances for the conveyance of injured or disabled persons, our object being to construct such carriages of light weight but of great strength and so arranged that an injured person may be removed therefrom and lain without lifting or like disturbance upon a bed or table.

In the accompanying sheet of explanatory drawings to be hereinafter referred to :—

Figure 1 is a side elevation and Figure 2 a plan of our improved ambulance.

Figure 3 is a plan of the stretcher frame, detached from the ambulance.

The same reference letters in the different views indicate the same parts.

In carrying our invention into effect we construct the underframe A of the improved ambulance from two or more tubes preferably of weldless steel, arranged longitudinally and connected or braced together by two or more cross tubes. The cross tubes are preferably attached to the longitudinal tubes by means of tee socket pieces or by brazed connections. The underframe is mounted upon a suitable axle provided with light wheels of the cycle type, which are preferably fitted with pneumatic tyres. We sometimes interpose a spring or springs between the underframe and the axle, the ears and brackets forming the connection between the underframe and the outer ends of the springs, being brazed or otherwise attached to the longitudinal tubes, and the one or both ends of such tubes may be prolonged and suitably shaped to form convenient handles for wheeling or propelling the ambulance, although we preferably provide handles such as B by prolonging the tubes of the stretcher frame hereinafter described. We provide a foot or support C at the head end of the ambulance, by attaching a rod or tube preferably of U shape on each side of the underframe, stayed or connected together by a small tie rod D. We sometimes attach a light box to the underframe for the reception of surgical dressing and other materials required in the rendering of first aid to injured persons.

The stretcher frame E which is carried upon but quite independent from the underframe A, is in like manner constructed from tubes arranged in a longitudinal and transverse direction, and provided with suitable socket, or other connecting pieces, to secure the parts together. Connections are also provided for suspending a woven wire or other spring mattress, when such is employed, and the canvas hammock F or like part of the stretcher, and for securing the wire or other part of the stretcher, and for securing the wire or other ribs or stays of the hood or cover G. We sometimes attach loop or staple pieces to the stretcher frame to receive the ends of straps that may be required to secure the injured or disabled person or for fastening the sides of the canvas or other hood. Upon the underside

of the stretcher frame we fix rollers such as H for convenience in mounting it upon the underframe, and we secure the stretcher to the underframe by straps J or by other suitable connections.

We secure the canvas hammock or like part F by strapping it to the stretcher frame, or by some suitable connections enabling the hammock to be readily detached from the frame E when the stretcher with the injured person is lain upon a bed or table. The wire or other spring mattress beneath the hammock is also so connected to the frame that it may be readily detached. In this manner we provide for the withdrawal of the stretcher from the injured person, and thus avoid the necessity of lifting the person from the stretcher.

We do not limit the application of our invention to the production of ambulances of any one design, but modify the form of tubular construction and the application of detachable mattresses and hammocks as hereinbefore described, to meet the particular requirements of varying services, and making the ambulance suitable for propulsion either by manual or horse power.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. The improved ambulance having the underframe and the stretcher frame constructed from steel or other tubes substantially as herein described.

2. In ambulances the use of a detachable stretcher frame so arranged as to permit of its withdrawal from an injured person substantially as and for the purposes hereinbefore described and as illustrated in the accompanying drawings.

3. The improved general construction and arrangement of an ambulance substantially as and for the purposes hereinbefore described and as illustrated in the accompanying drawings.

Dated this 18th day of May 1895.

MARKS & CLERK,
18, Southampton Buildings, London, W.C., and
13, Temple Street, Birmingham, Agents for the Applicants.

London: Printed for Her Majesty's Stationery Office, by Darling & Son, Ltd.—1895